

EXHIBIT 2

HAL J. SINGER, PH.D. Confidential
CORTZO V. BROWN UNIVERSITY

November 27, 2024

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS

ANDREW CORTZO, SIA HENRY, : CIVIL ACTION
ALEXANDER LEO-GUERRA, MICHAEL :
AMAERLANDER, BRANDON PIYEVSKY, :
BENJAMIN SHUMATE, BRITTANY :
TATIANA WEAVER and CAMERON :
WILLIAMS, individually and on :
behalf of all others similarly :
situated, :

Plaintiff :

V. :

BROWN UNIVERSITY, CALIFORNIA :
INSTITUTE OF TECHNOLOGY, :
UNIVERSITY OF CHICAGO, THE :
TRUSTEES OF COLUMBIA :
UNIVERSITY IN THE CITY OF NEW :
YORK, CORNELL UNIVERSITY, :
TRUSTEES OF DARTMOUTH :
COLLEGE, DUKE UNIVERSITY, :
EMORY UNIVERSITY, GEORGETOWN :
UNIVERSITY, MASSACHUSETTS :
INSTITUTE OF TECHNOLOGY, :
NORTHWESTERN UNIVERSITY, :
UNIVERSITY OF NOTRE DAME DU :
LAC, THE TRUSTEES OF THE :
UNIVERSITY OF PENNSYLVANIA, :
WILLIAM MARSH RICE UNIVERSITY, :
VANDERBILT UNIVERSITY, and :
YALE UNIVERSITY, : CASE NO.
Defendants. : 1:22-cv-00125

November 27, 2024

C O N F I D E N T I A L

Videotaped deposition of
HAL J. SINGER, Ph.D.

ESQUIRE DEPOSITION SOLUTIONS

FINAL TRANSCRIPT WITHOUT CONFIDENTIALITY
DESIGNATIONS



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1 members.

2 BY MR. GRINGER:

3 Q. So, you analyzed that data from
4 Swarthmore College in your regressions?

5 A. No.

6 Q. Do you know Swarthmore College
7 was a member of the 568 Group?

8 A. Sitting here, I can't tell you
9 if they were, but I don't think that they
10 would have, you know, made certain criteria
11 that plaintiffs have required to be a
12 defendant in the case.

13 Q. Do you know if Wesleyan was a
14 member of the 568 Group?

15 A. They may have attended a
16 meeting, but I don't know if they were a
17 member.

18 Q. Do you know if Pomona College
19 was a member of the 568 Group?

20 A. I haven't seen any documents or
21 evidence on Pomona College.

22 Pomona did you say?

23 Q. Yeah, Pomona.

24 A. Yeah.

25 Q. You don't know one way or the

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1 other if they were a member?

2 A. If I don't get to see their

3 documents or data, it's hard for me to say.

4 If the plaintiffs haven't named

5 them as a defendant, my strong surmise is

6 there's something different about Pomona.

7 Q. Is it your strong surmise that

8 maybe it would be inconvenient for the

9 proposed market definition to look at Pomona

10 College?

11 MR. CRAMER: Objection to form.

12 THE WITNESS: Would it -- I mean

13 are you asking me is that the reason why be

14 they didn't name Pomona as a defendant?

15 BY MR. GRINGER:

16 Q. You said you surmised asking.

17 Is that the reason?

18 MR. CRAMER: Objection form.

19 Asked and answered.

20 THE WITNESS: I don't have an

21 opinion on that.

22 BY MR. GRINGER:

23 Q. You don't know whether Pomona

24 college was a member of the 568 Group;

25 correct?

1 would tend to cause my regression to
2 understate the effect of the conduct.

3 BY MR. GRINGER:

4 Q. Is that something you've looked
5 at, whether there are changes in the results
6 between the benchmark period and the class
7 period at the school level?

8 MR. CRAMER: Objection to form.

9 THE WITNESS: I don't run models
10 of course for individual schools. But I
11 am -- when I code a school as being zero in a
12 given year, I'm assuming, I'm telling the
13 computer to assume that the conduct is off;
14 right?

15 That they are now setting prices
16 no longer pursuant to the strictures of the
17 568. And so to the extent that they don't
18 immediately change, now I'm repeating myself,
19 that would tend to bias these coefficients
20 towards zero.

21 That would cause my methodology
22 to understate the effect of the conduct.

23 BY MR. GRINGER:

24 Q. So, I take it your understanding
25 is that one of the strictures of 568 was that

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1 you can't have a no-loan policy. Is that
2 correct?

3 A. Well, we've been through this
4 before; right?

5 So, Penn obviously did while it
6 was in 568, so, we -- as an economist, I
7 can't infer from that that there's a hard
8 rule that says don't. We know the
9 affordability principle applied to packaging.
10 We see a whole bunch of schools adopting no
11 loans upon leaving. We have record evidence
12 that tells us why Penn and I think you said
13 Columbia did it in response to Yale and
14 Dartmouth thought that they were cheating on
15 the agreement. So, there's a lot there.

16 But I feel like we've been
17 through here before. I fully admit that you
18 could go no loan while inside a 568. Penn
19 did so. I mean no reasonable person could
20 say otherwise.

21 Q. If there was a conspiracy among
22 some, but not all defendants, are your
23 regression models capable of capturing that?

24 MR. CRAMER: Objection to form.
25 Incomplete hypothetical.

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1 \$10,000 jump in the EIPs in the first year
2 and that's a bigger jump than we had ever
3 seen leading up to that. And then we see
4 another jump that I think is on the order of
5 \$20,000.

6 And so, we are very skeptical
7 about what's going on with the post 2016
8 data.

9 I have all other sorts of
10 thoughts on it, too, but I don't want to keep
11 talking. You go ahead.

12 Q. I appreciate that. Thank you.

13 You're making the assumption
14 that the data until 2016 when the database
15 changed is accurate; correct?

16 A. I am making an assumption that
17 it is accurate and I am -- but most
18 importantly, and I think this is I'm going to
19 tee up this dispute, we have variation in the
20 conduct, in the pre '16 period; right?

21 So, whatever infirmities that
22 pre '16 data might have, what's nice is that
23 we can -- we can see how it changes with
24 respect to a change in the conduct.

25 The problem, you know, Dr. Hill

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1 proposed during his deposition, that we
2 should instead only include 2016 post 2016.

3 And the problem with that, I
4 don't know if he's aware or not, but it's
5 just a run of zeros. There's no variation in
6 the conduct during that period.

7 So, if you limit the data that
8 way, you're, by design or by accident,
9 depriving the model of being able to
10 ascertain any effect of the challenged
11 conduct.

12 And if that one was done in
13 isolation, I would say okay, maybe it was an
14 oversight.

15 But there's a theme that emerges
16 in Dr. Hill's criticisms, in that they are
17 almost all appear to be motivated as a way to
18 deprive the regression of the data that it
19 would need to find an effect.

20 We can go through the Chicago
21 example where he chooses post 2016, the
22 killing 2023, which is one of the only years
23 that we have for many of these schools that
24 they weren't in the conduct. He wants it
25 gone from the regression. You know, the

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1 staggered DID deprives it of the Yale
2 experience after they leave. The cluster
3 standard errors we talked about, depriving
4 the classification of errors. Putting in the
5 COVID period through 2024, which of course
6 coincides with the very few clean period
7 observations we have as away to conflate the
8 model and to inject confusion as to what is
9 causing it, between COVID and the conduct.

10 Finally the year fixed effects
11 as opposed to my time is another way to
12 inject collinearity with the conduct and
13 therefore make it harder for the regression
14 to find an effect.

15 I feel like the theme that's
16 emerging from Dr. Hill is that not how to
17 design the best model, but how can I derive
18 the model? How can I, Dr. Hill, deprive the
19 model by making these choices to ever find an
20 effect.

21 I realize it's very convenient
22 for the defendants to not find an effect, but
23 that can't be the load star. The load star
24 can't be let me suggest changes that deprive
25 the model. We have to give the model the

1 data. We have to give it a chance to find
2 these effects.

3 Q. I appreciate all that context.
4 My question was really just are you making
5 the assumption that the data until 2016 when
6 the database changed is accurate? You
7 answered that and then went on, I think, you
8 know, and I don't want to fight with you too
9 hard on this. You're an expert. I
10 understand this. But am going to move to
11 strike everything after the word accurate in
12 this answer.

13 MR. CRAMER: We'll oppose that
14 motion.

15 MR. GRINGER: It was a little
16 lengthy, I think all things considered.
17 BY MR. GRINGER:

18 Q. You don't actually know which
19 data set with regard to Chicago is the
20 accurate data set; correct?

21 MR. CRAMER: Objection to form.

22 THE WITNESS: I know that the
23 two can't be put side by side; right?

24 What I -- and also, when you say
25 accurate, we don't want to hold up the data.

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1 There's no such thing as a pristine database.

2 Every database is going to have a certain

3 amount of infirmities.

4 What I think is more attractive

5 about the pre 2016 is that you at least have

6 variation in the conduct. You at least have

7 the opportunity to see, do prices change when

8 the conduct goes in and out; right?

9 So, if we're forced to chose

10 between pre 2016 and post 2016, to me it's a

11 very easy choice. One gives the model an

12 opportunity to find an effect. It doesn't

13 guarantee an effect but it gives the model an

14 opportunity to find one, if one exists.

15 Dr. Hill's choice precludes the

16 model from finding an effect.

17 If you just have a run of zeros,

18 we can't find an effect. You've basically

19 eliminated Chicago's contribution, right, to

20 informing the conduct variable.

21 Q. How is that any less outcome

22 determinative than what you just criticized

23 Dr. Hill for doing?

24 A. Because there's no guarantee of

25 an outcome. There's no guarantee of an

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1 outcome just because you have zeros and ones.

2 We could run the regression and

3 find that there was no effect; right?

4 But at least you have some

5 period of zeros and some period of ones to

6 test. You have data that you're feeding the

7 model; right?

8 If we take Dr. Hill's approach,

9 which is throw out 2023, you know, just look

10 at Chicago post 2016; right? We're taking

11 away some of the very small sources of

12 variation in the database where you have

13 clean periods, right, or where you have a

14 change in the conduct.

15 If my methodology is let's

16 exploit the changes, and his fixes are just

17 remove the possibility of studying changes,

18 right, then the likelihood of finding an

19 effect is going to vanish.

20 Q. You're the one who removed the
21 2016 to 2022 Chicago data; correct?

22 A. I removed the 2016 because it
23 can't be compared. When you see the \$10,000
24 jump when they change databases and then you
25 see another jump of \$20,000, something is

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1 free ride as a sophomore, but had paid
2 something as a freshman, there would be a
3 decrease in effective institutional price for
4 that student. Is that right?

5 A. If you included them in the
6 database in that second year, yes. And you
7 only computed EIP for that student, you'd see
8 a decrease, a decrease in EIP, yes.

9 Q. And so if a student received
10 paid in year one and received a free ride in
11 year two, you would include the year one
12 observation but exclude the year two
13 observation; correct?

14 A. I think through this exclusion,
15 I think I'd want to go back and check, but
16 through this exclusion, I think that we're
17 taking out any one in any year who got the
18 full ride tuition.

19 Q. How does that choice not bias
20 your results because you're excluding someone
21 who in a particular year he got a free ride?

22 MR. CRAMER: Objection to form.

23 THE WITNESS: This may never
24 happen, right, in the database.

25 But because my understanding is

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1 that the schools tend to be most generous in
2 the first year and then their generosity
3 declines over time. But you're asking me,
4 hypothetically, could it happen? I don't
5 know if it's ever happened.

6 BY MR. GRINGER:

7 Q. Okay. But just -- I understand
8 you may not know whether or not it happened.
9 That wasn't my question. I take it your
10 testimony is you don't actually know whether
11 or not that has occurred?

12 MR. CRAMER: Objection. Form.
13 Asked and answered.

14 THE WITNESS: From my
15 understanding, it would tend not to occur.
16 They go in the opposite direction. They get
17 less generous over time.

18 BY MR. GRINGER:

19 Q. What's your basis for saying
20 that the schools get less generous over time?

21 A. I think I have a cite.

22 Q. I think I saw you say that. I
23 didn't see any cite.

24 Sitting here today, can you tell
25 me the basis for your statement that the

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1 (Whereupon, Deposition Exhibit
2 Singer-9, Surrebuttal Expert Report of Lauren
3 J. Stiroh, Ph.D., was marked for
4 identification.)

5 - - -

6 BY MR. GRINGER:

7 Q. If you could turn to Page 14,
8 Singer-9, 3.86.

9 This is an actual Cornell
10 student in your data, Dr. Singer.

11 And this student ostensibly is
12 overcharged by \$1,282 in year one, \$4,030 in
13 year two, undercharged by \$9,487 in year
14 three and was harmed by \$8,983 in year four.

15 What could explain the switch
16 from a \$4,030 overcharge in year two to a
17 \$9,487 undercharge in year three?

18 A. Yeah. It's easy. He got --
19 this student, I don't know if it's a man or a
20 woman, but if you look at the actual EIP in
21 Column D, they got a remarkably low EIP. And
22 it's so low that I priced the regression.
23 The regression can't explain why it was so
24 low.

25 So, when I go to predict what

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1 this person would have paid, my prediction is
2 above the actual EIP in that third year. My
3 prediction, the best prediction I can make,
4 given all the characteristics of that
5 student, is that that student's EIP in year
6 three would have been 17,226.

7 But in fact, they got this
8 remarkably low EIP of 7,739.

9 So, I cannot show injury under
10 this method in year three.

11 Q. What could explain the switch
12 from the \$4,030 overcharge in year two to the
13 \$9,487 undercharge in year three?

14 MR. CRAMER: Asked and answered.
15 He just answered that question.

16 THE WITNESS: I mean I can do it
17 again.

18 I think maybe you're asking now
19 why didn't that happen in the previous year?

20 MR. GRINGER: Okay.

21 THE WITNESS: I can answer it --
22 let me just say it. It's okay.

23 Look at the price in the
24 previous year. I mean you're going to see a
25 pattern.

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1 Here the price shot up from
2 their initial EIP, their initial EIP was
3 14,000. Do you see that?

4 It goes up to 19,000 in year
5 two. And the regression predicts, the
6 prediction model, right, my best-fitting
7 model, model six, right, is that this student
8 would have paid in year two an EIP of 15,501;
9 right?

10 And, therefore, they suffered an
11 overcharge of \$4,000; right?

12 But I don't want you to look at
13 the 4,000 and the minus 9,000 and think
14 there's some infirmity with the prediction.

15 The model just could not have
16 predicted that this student would have gone
17 from 14 to 19 to 7,000 in an EIP.

18 These are the examples I'm
19 talking about before where these very large
20 discounts manifest. The model could not have
21 predicted them and the model will consider
22 the student to be uninjured in those years.

23 Despite the fact that whatever
24 shock gave that low price, likely that same
25 shock would have occurred in the but-for

1 Q. Okay.

2 A. And I could -- I just happen to
3 have the page here.

4 Q. Please.

5 A. Let me just confirm.

6 Q. Please confirm.

7 A. Yes. That's the only
8 difference.

9 Q. Now we've been talking all about
10 EIPs. And you've built a regression model to
11 analyze the challenged conducts impact on
12 EIPs; correct?

13 A. Correct.

14 Q. And you define EIP as the cost
15 of attendance minus institutional grant aid;
16 correct?

17 A. Correct.

18 Q. EIP is a measure you came up
19 with; correct?

20 A. It is a measure I came up with,
21 but it's based off of a much more commonly
22 known net price measure.

23 The reason, as I explained in my
24 report, I didn't want to use net price is
25 that net price subtracts out aid from other

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1 sources.

2 And I felt like including that
3 into the dependent variable would create a
4 source of confusion and would confound what
5 we're looking for.

6 And I'm fairly confident that
7 Dr. Hill uses the same measure of pricing
8 that I do as well.

9 Q. Your EIP metric does not include
10 work study awards; correct?

11 A. I don't think the base version
12 of my EIP model uses work study. It's
13 subtracting out institutional grant aid.

14 Q. Why does your definition of EIP
15 not include work study awards?

16 A. Because the theory of harm here
17 is that the defendants coordinated in their
18 decisions of how much to offer in terms of
19 grant aid.

20 So, if we included other
21 measures of aid that were outside of what I
22 think the scope of the challenged conduct is,
23 I don't think there's a theory of harm that
24 says that this inflated work study or
25 deflated work study. Now they may have gone

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1 MR. CRAMER: There are a lot of
2 class members in here.

3 MR. GRINGER: Could you stop it?

4 MR. CRAMER: It was a joke.

5 MR. GRINGER: First of all, i
6 did receive financial aid from Penn which is
7 more than certain people and their children
8 can say. Okay?

9 BY MR. GRINGER:

10 Q. So, you don't know, and we can
11 come back to that, Dr. Singer.

12 But just so the record is clear,
13 if a student received \$50,000 in grant aid
14 and the \$2,000 work study award and the cost
15 of attendance was \$80,000, the student would
16 pay to the school \$28,000; correct?

17 MR. CRAMER: Asked and answered.

18 THE WITNESS: That sounds right.

19 BY MR. GRINGER:

20 Q. But you would treat the EIP as
21 \$30,000; correct?

22 A. Correct.

23 Q. So you're personally inflating
24 your measure of the EIP inflates what every
25 single potential class member actually paid